

THE CLAIMS

1. A system for detecting signals including a signal detector comprising:
a receiver for receiving at least a first segment of a signal and a second segment of
the signal, the first and second segments of the signal representing separate periods of
5 time, wherein the signal comprises a signal of interest perturbed by noise or pseudo-
noise;

a correlator coupled to the receiver for deriving first correlation data ,
representative of the correlation between the first segment and a hypothesis, and second
correlation data representative of the correlation between the second segment and the
10 hypothesis; and

a combiner coupled to the correlator for determining a parameter difference
between the first and second correlation data, for adjusting a selected one of the first and
second correlation data responsive to the parameter difference, and combining the
adjusted data with the other of the first and second correlation data to obtain cumulative
15 correlation data useful for detecting at least a parameter of the signal of interest.

2. The signal detector of claim 1 in which the receiver is an RF receiver.

3. The signal detector of claim 1 in which the signal of interest is a carrier signal
modulated with a repeating PN code.

4. The signal detector of claim 1 in which the correlator is a matched filter.

20 5. The signal detector of claim 1 in which the combiner is a processor.

6. The signal detector of claim 1 in which the parameter difference is a code phase
difference, and the combiner is configured to adjust the selected one of the first and
second correlation data responsive to the code phase difference.

7. The signal detector of claim 1 in which the combiner is configured to successively combine the correlation data for successive segments until the signal of interest or a parameter of the signal of interest can be accurately and reliably detected.

8. The signal detector of claim 7 in which the parameter of the signal of interest is the code phase of the signal.

9. The signal detector of claim 7 in which the parameter of the signal of interest is the presence of the signal.